

**Gracelawn Memorial Park
Androscoggin County
Auburn, Maine
A-193-71-F-A**

**Departmental
Findings of Fact and Order
Air Emission License**

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. Gracelawn Memorial Park of Auburn, Maine was issued Air Emission License A-193-71-E-R on October 7, 2003, permitting the operation of three Class IV-A (crematory) incinerators.
2. Gracelawn Memorial Park has requested an amendment to their license in order to install a new (fourth) crematory incinerator.

B. Emission Equipment

Gracelawn is authorized to operate the following equipment, in addition to the equipment listed in Air Emission License A-193-71-E-R:

	Crem4
No. of Chambers	2
Class of Material Charged	4
Max. Design Comb. Rate (lb/hr)	180
Auxiliary Fuel Input	
Primary Chamber (Btu/hr)	750,000
Secondary Chamber (MMBtu/hr)	1.5
Pollution Control Equipment	Afterburner
Stack Number	4

C. Application Classification

This amendment will increase emissions by less than 4 ton/year for each single pollutant and less than 8 ton/year for all pollutants combined. Therefore, this modification is determined to be a minor revision and has been processed as such.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas. BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in Chapter 100 of the Department's regulations. BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Crematory 4

Gracelawn Memorial Park operates Crem4, which is a natural gas fired class IV-A (crematory) incinerators manufactured in 2004 with the specifications shown in Section 1B. The incinerator is not subject to New Source Performance Standards (NSPS).

BPT for the incinerator is the following:

1. A maximum particulate emission rate of 0.10 gr/dscf corrected to 12% CO₂ will be met.
2. Visible emissions from the stack of the incinerator shall not exceed 10% on a 6-minute block average basis.
3. Operating temperature in the secondary chamber shall be maintained at or above 1600°F, with a stack gas retention time, at or above 1600°F, of at least 1.0 second.
4. To insure an efficient burn, and to prevent odors and visible emissions, the secondary chamber will be preheated, as specified by the manufacturer, until the pyrometer temperature measures at least 1600°F.
5. The temperature in the secondary chamber shall be maintained at a minimum of 1600°F for the duration of the burn cycle.
6. A pyrometer and 1/4 inch test port shall be installed and maintained at that location of the incinerator or refractory lined stack which provides sufficient volume to insure a flue gas retention time of not less than 1.0 second at a minimum of 1600°F.
7. A log will be maintained recording the weight of the charge, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged shall be logged on the chart.

8. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

C. Annual Emission Restrictions

Gracelawn Memorial Park shall be restricted to the following annual emissions, based on 2,080 hours/year of operation for each incinerator on a 12 month rolling total:

Total Allowable Annual Emission for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Crem1</u>	<u>Crem2</u>	<u>Crem3</u>	<u>Crem4</u>	<u>Tons/Year</u>
PM	0.53	0.53	0.72	0.43	2.21
PM ₁₀	0.53	0.53	0.72	0.43	2.21
SO ₂	0.01	0.01	0.01	0.17	0.20
NO _x	0.01	0.01	0.02	0.28	0.32
CO	0.09	0.09	0.01	0.23	0.42
VOC	0.01	0.01	0.01	0.02	0.05

III.AMBIENT AIR QUALITY ANALYSIS

According to Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Based on the above total facility emissions, Gracelawn Memorial Park is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License Minor Revision A-193-71-F-A, subject to the conditions found in Air Emission License A-193-71-E-R and the following conditions:

The following replaces Condition (16) in License A-193-71-E-R:

(16) Incinerators

- (i) The incinerators shall each not exceed the manufacturer's maximum design feed rates. Natural gas input to the primary and secondary chambers shall not be less than 600,000 Btu/hr and 1,000,000 Btu/hr, respectively, for Crem1 and Crem2, 600,000 Btu/hr and 1,400,000 Btu/hr, respectively, for Crem3, and 750,000 Btu/hr and 1,500,000 Btu/hr, respectively, for Crem4.
- (ii) Each incinerator shall operate for a maximum of 2080 hours/year, on a 12 month rolling total. Compliance shall be demonstrated through the incinerator operation log.
- (iii) Licensed allowed emissions for the incinerators shall not exceed the following:

Incinerator Emission Limits (per incinerator)

	Crem1 & Crem2	<u>Crem3</u>	<u>Crem4</u>
PM₁₀	0.52 lb/hr	0.69 lb/hr	0.42 lb/hr
PM₁₀	0.52 lb/hr	0.69 lb/hr	0.42 lb/hr
SO₂	0.01 lb/hr	0.01 lb/hr	0.17 lb/hr
NO_x	0.01 lb/hr	0.02 lb/hr	0.27 lb/hr
CO	0.09 lb/hr	0.01 lb/hr	0.23 lb/hr
VOC	0.01 lb/hr	0.01 lb/hr	0.03 lb/hr

Compliance shall be demonstrated through stack testing in accordance with the appropriate method found in 40 CFR Part 60, Appendix A, and by request of the Department.

- (iv) A maximum particulate emission rate of 0.10 gr/dscf corrected to 12% CO₂ shall be met for each incinerator.
- (v) Visible emissions from the stack of each incinerator shall not exceed 10% on a 6-minute block average basis.
- (vi) Operating temperature in the secondary chamber shall be maintained at or above 1600°F, with a stack gas retention time, at or above 1600°F, of at least 1.0 second.
- (vii) To insure an efficient burn, and to prevent odors and visible emissions, the secondary chamber will be preheated, as specified by the manufacturer, until the pyrometer temperature measures at least 1600°F.
- (viii) The temperature in the secondary chamber shall be maintained at a minimum of 1600°F for the duration of the burn cycle.
- (ix) A pyrometer and 1/4 inch test port shall be installed and maintained at that location of the incinerator or refractory lined stack which provides

sufficient volume to insure a flue gas retention time of not less than 1.0 second at a minimum of 1600°F.

- (x) A log will be maintained recording the weight of the charge, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged shall be logged on the chart.
- (xi) The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-193-71-E-R.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: August 13, 2004

Date of application acceptance: August 17, 2004

Date filed with the Board of Environmental Protection: _____

This Order prepared by Rachel E. Pilling, Bureau of Air Quality.